

## ***Project Summary and Justification***

Department	Public Utilities
Division	Water Supply & Distribution

The 2006-2012 Capital Improvement Program for the Lincoln Water System has been prepared and updated based upon information and recommendations contained in the 2002 Comprehensive Plan and the 2002 Water Master Plan. These documents are based upon the need to eliminate or reduce existing system deficiencies, replace deteriorating infrastructure, and the need to construct capital facilities in order to ensure that the citizens of the City of Lincoln are supplied with an adequate quantity of high quality water. It is important that these capital improvements be planned judiciously and implemented on a timely basis to provide assurances of meeting these objectives.

### **Project 1      General System Improvements**

- a      Security Upgrade**  
To enhance the security of critical water infrastructure.
- b      Facilities Master Plan**  
To update the 2002 Master Plan with respect to planned improvements and community growth, required every five years.
- c      Preliminary Design & Engineering Support**  
To provide for efforts not directly related to funded projects, i.e., aerial photos, contours, GIS map conversions, etc.

### **Project 2      Water Supply: Wells, Treatment, and Transmission**

- a      Control System Upgrade**  
To replace or upgrade hardware, software, and communication wires at treatment plant.
- b      Additional Supply**  
To continue to provide water rights, evaluate existing supply capacity, and plan for supply beyond existing facilities.
- c      Infrastructure Rehabilitation**  
To make minor improvements to existing production facilities such as windows, doors, gutters, etc.
- d      Treatment Plant Expansion**  
To provide at least a 25 MGD plus increase to existing capacity of 110 MGD to water treatment plant.
- e      Water Supply Wells**  
To provide at least a 25 MGD plus increase to existing capacity of 110 MGD to water supply wells.

### **Project 3      Storage Reservoirs**

- a      Floating Storage Reservoir - Cheney Booster District**  
To construct a new elevated storage reservoir near 98<sup>th</sup> & Breagan Road, just south of Yankee Hill Rd., to provide fire storage and reliability to growth areas in SE Lincoln.

### **Project 4      Pump Stations**

- a      "A" St. Pumping Station Upgrades**  
To provide for the replacement of several pumping systems.

## ***Project Summary and Justification (cont.)***

Department	Public Utilities
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### **Project 5 Major Transmission Mains**

#### **a Transmission Main to Lincoln**

To construct water transmission main to increase capacity above existing 100 MGD to meet growth needs of the city.

#### **b Transmission Main, NE to Vine - Carlos & Eastborough to 88<sup>th</sup> & Holdrege**

To construct transmission main in developing areas near 84<sup>th</sup> & Holdrege prior to full build out of commercial development.

### **Project 6 Selected Replacement of Water Facilities or Mains such as:**

To replace water distribution mains that have served their useful life. Selection is based on deteriorated condition, opportunity to coordinate with major road project, roadway rehabilitation, or community redevelopment. These projects should improve local water quality and distribution reliability, enhance fire protection, and help avoid disruption to the traveling public.

#### **a GIS Data Conversion**

#### **b Air Park**

#### **c 20<sup>th</sup>, “A” to Prospect**

#### **d 2nd, “M” to “J” to 1st**

#### **e Lewis, Nelson to Benton**

#### **f 34<sup>th</sup>, Lake to Smith to 35<sup>th</sup>**

#### **g 59<sup>th</sup>, Schweitzer to Johanna**

#### **h Cornhusker, 1st to NW 4<sup>th</sup>**

#### **i Glade, 56<sup>th</sup> to 58<sup>th</sup> to Normal**

#### **j SW 15<sup>th</sup>, “A” to Garfield**

#### **k N 56<sup>th</sup>, Fletcher to valve #8**

#### **l St. Paul, 42nd to 47<sup>th</sup>**

#### **m 37th, Calvert to Prescott**

#### **n 66<sup>th</sup>, Morrill to Havelock**

#### **o Sumner, 48<sup>th</sup> to 52nd**

#### **p Replacement of inoperable valves at various locations**

### **Project 7 Distribution Mains - Listed by Impact Fee Benefit Area**

To construct water distribution mains such as the following to serve the growth areas as provided in the Comprehensive Plan, coordinated with development and paving schedules where possible. Funds are appropriated for each benefit area to provide flexibility to construct mains as growth and development occur.

#### **a Mains in Area #1**

South St., SW 27<sup>th</sup> to SW 33<sup>rd</sup>

W. Adams, NW 48<sup>th</sup> to NW 56<sup>th</sup>

Coddington, “A” to “O”

NW 56<sup>th</sup>, “O” to Holdrege to NW 48<sup>th</sup>

Superior, NW 60<sup>th</sup> to NW 70<sup>th</sup>

***Project Summary and Justification (cont.)***

Department	Public Utilities
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- b Mains in Area #2**  
Alvo, NW 12<sup>th</sup> to NW 20<sup>th</sup>  
14<sup>th</sup> & Alvo to N 27<sup>th</sup> & Arbor  
Fletcher, 14<sup>th</sup> to 17<sup>th</sup>  
1st & Arbor to NW 12<sup>th</sup> & Alvo to US 34
- c Mains in Area #3**  
Arbor, 56<sup>th</sup> to 70<sup>th</sup> to 1/4 mile south  
56<sup>th</sup> Arbor to 1/2 mile south of Bluff Rd.
- d Mains in Area #4**  
Adams, 81<sup>st</sup> to 87<sup>th</sup>, 91st to 98<sup>th</sup> to Leighton  
Havelock, 70<sup>th</sup> to 84<sup>th</sup>  
Holdrege, 88<sup>th</sup> to Stevens Creek  
98<sup>th</sup>, Leighton to "O" St.  
"O" St., 84<sup>th</sup> to 98<sup>th</sup>  
"O" St., 98th to 112<sup>th</sup>
- e Mains in Area #5**  
98<sup>th</sup>, Pine Lake to Yankee Hill
- f Mains in Area #6**  
Rokeby, 33<sup>rd</sup> to 40<sup>th</sup>  
84<sup>th</sup>, Amber Hill to Yankee Hill  
Yankee Hill, 70<sup>th</sup> to 84<sup>th</sup>  
Rokeby, 40<sup>th</sup> to 48<sup>th</sup>  
Yankee Hill, 56<sup>th</sup> to 84<sup>th</sup>  
70<sup>th</sup>, Yankee Hill to Rokeby
- g Mains in Area #7**  
Folsom, Pioneers to Old Cheney  
Folsom, Old Cheney to W. Denton  
Old Cheney, 1st to SW 12<sup>th</sup>  
Coddington, Van Dorn to Pioneers to Old Cheney  
Old Cheney, Coddington to SW 12<sup>th</sup>

**Project 8 Distribution Capacity/Subsidies to Street Construction**

- a Distribution System Capacity Cost**  
To provide for subsidy to developer to construct 12-inch mains on half mile grid to provide adequate flow for fire protection and to subsidize costs over the maximum assessment rate on water districts.
- b.1 Subsidies to Street Construction**  
To pay for the cost of relocating mains that conflict with roadway line and grade on Major Road Projects.
- b.2 Subsidies to Antelope Valley**  
To pay for the cost of relocating mains that conflict with roadway and channel line and grade on Antelope Valley Projects.

***Project Summary and Justification (cont.)***

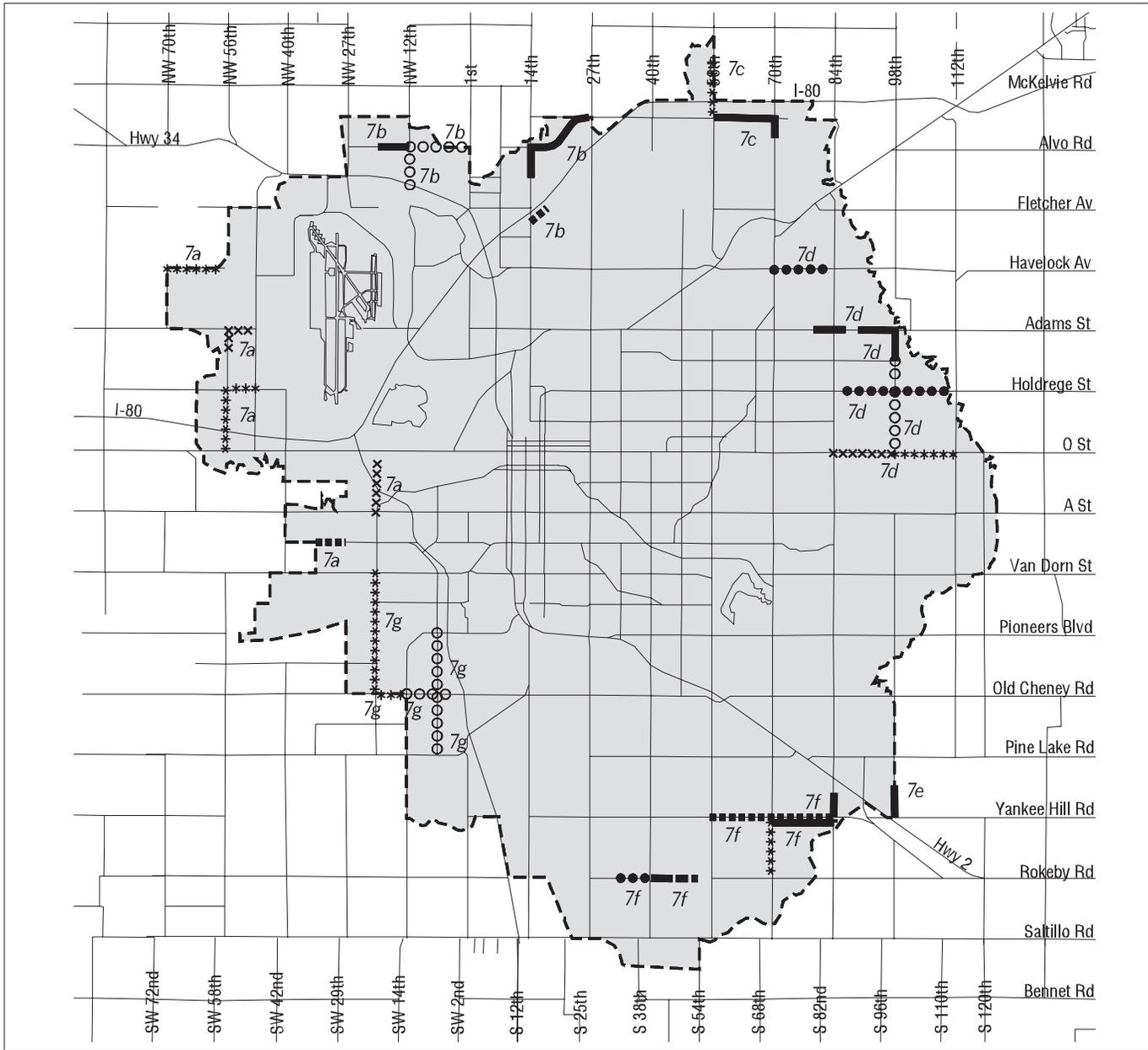
Department	<u>Public Utilities</u>
Division	<u>Water Supply &amp; Distribution</u>

The City Council, by the adoption of the Annual Budget, hereby authorizes the acquisition of all necessary rights-of-way, easements, or other interests in land, by purchase if possible, by condemnation if necessary, for those projects included within the first year of said Capital Improvement Program.

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# Lincoln CIP 2006 - 2012

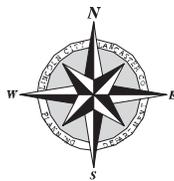
# Public Utilities Lincoln Water System



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## Lincoln's Future Service Limit Shown as Gray

Map prepared by  
City - Co. Planning Dept  
GIS Section



M I L E S



### Symbol for Fiscal Years

—————	2006 - 2007
.....	2007 - 2008
●●●●●●	2008 - 2009
○○○○○○	2009 - 2010
xxxxxxxx	2010 - 2011
*****	2011 - 2012

The year shown on this map reflects the year of estimated project completion. Consult the detailed project descriptions and funding schedule for further information.

***List of Projects***

*Department: Public Utilities/Water Supply and Distribution*

Project  
Number    Project Title

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- 1\*        General System Improvements
- 2\*        Water Supply - Wells, Treatment, and Transmission
- 3\*        Storage Reservoirs
- 4\*        Pump Stations
- 5\*        Major Mains
- 6\*        Selected Replacement of Mains
- 7         Distribution Mains
- 8\*        Distribution Capacity/Subsidies to Street Construction

\*Indicates project is NOT shown on the map.

(1) PROJ. NO.	(2) PROJECT TITLE	(3) PROJ. Prio.	(4) 3% Inflation per year PROGRAMMED EXPENDITURES & FUNDING SOURCES (FS) (000's)											
			2006-2007		2007-2008		2008-2009		2009-2010		2010-2011		2011-2012	
			FS		FS		FS		FS		FS		FS	
1	General System Improvements													
	A. Security Upgrade - 701222	A	500.0	UR	500.0	UR							500.0	UR
	B. Facilities Master Plan	A	600.0	RB								600.0	UR	
	C. Preliminary Design & Engineering Support - 506005	A	30.0	UR	50.0	UR	50.0	UR	50.0	UR	50.0	UR	50.0	UR
	<b>TOTAL PROJECT 1</b>		<b>1,130.0</b>		<b>550.0</b>		<b>50.0</b>		<b>50.0</b>		<b>50.0</b>		<b>1,150.0</b>	
2	Water Supply - Wells, Treatment & Transmission	A												
	A. Control System Upgrade - Ashland	A	960.0	RB										
	B. Additional Supply - 506010	A	300.0	RB	300.0	RB	300.0	RB	300.0	UR	300.0	UR	300.0	RB
	C. Infrastructure Rehab	A	60.0	UR	60.0	UR	65.0	UR	65.0	UR	70.0	UR	70.0	UR
	D. Treatment Plant Expansion (25+ MGD) **	A					1,670.0	RB	6,950.0	RB	7,260.0	RB	760.0	RB
	E. Water Supply Wells (25+ MGD) **	A			840.0	RB	4,150.0	RB	4,220.0	RB	700.0	IF	750.0	IF
	<b>TOTAL PROJECT 2</b>		<b>1,320.0</b>		<b>1,200.0</b>		<b>6,865.0</b>		<b>12,265.0</b>		<b>8,330.0</b>		<b>1,880.0</b>	
3	Storage Reservoirs													
	A. Floating Storage Reservoir - C B S - 98th & Breagan Rd - 701825	A	3,340.0	RB										
	<b>TOTAL PROJECT 3</b>		<b>3,340.0</b>											
4	Pump Stations													
	A. "A" St PS Upgrades	A	100.0	RB	400.0	RB								
	<b>TOTAL PROJECT 4</b>		<b>100.0</b>		<b>400.0</b>									
5	Major Mains													
	A. Transmission Main to Lincoln - Greenwood - NE - 506212	A	300.0	RB	8,650.0	RB	7,770.0	RB						
	B. Transmission Main to Lincoln - NE - Vine - 506212	A	1,250.0	IF	630.0	IF								
	Carlos & Eastborough to 88th & Holdrege		3,200.0	RB										
	NEPS to 88th & Holdrege											1,000.0	RB	
	<b>TOTAL PROJECT 5</b>		<b>4,750.0</b>		<b>9,280.0</b>		<b>7,770.0</b>					<b>1,000.0</b>		

(5)	(6)	(7)		(8)	(9)	(10)	(11)					(1)	
SIX YEARS (000's)	COST BEYOND 2011-2012 (000's)	PRIOR APPROPRIATIONS (000's)		TOTAL CAP COSTS (000's) (5)+(6)+(7)	COMP PLAN CONFORM	STATUS OF PLANS	COST BREAKDOWNS FOR SIX-YEAR EXPENDITURES (000's)					PROJ. NO.	
		YEAR	FS				PRELIM PLANS	FINAL PLANS	LAND ACQUI- TION	CONST	EQUIP / FURNISH		OTHER (EXPLAIN)
1,500.0	NA	2,550.0	03-06	4,050.0	GCP	2		355.0			3,195.0		1
1,200.0	Ongoing	NA		1,200.0	GCP	0	440.0						
280.0	Ongoing	NA		280.0	GCP	0	280.0						
2,980.0													
960.0	Ongoing	NA		960	GCP	1	96.0				864.0		2
1,800.0	Ongoing	NA		1,800.0	GCP	0	1,800.0						
390.0	Ongoing	NA		390.0	GCP	1	40.0				360.0		
19,890.0	890.0	None		20,780.0	GCP	2	1,888.0				16,992.0		
9,210.0	None	None		9,210.0	GCP	2	921.0				8,289.0		
32,250.0													
3,340.0	None	None		3,840.0	GCP	2	384.0				3,456.0		3
3,340.0													
500.0	None	None		500.0	GCP								4
500.0													
18,600.0	None	1,400.0	05-06	20,000.0	GCP	2		1,500.0	500.0		18,000.0		5
4,200.0	12,000.0	500.0	05-06	16,700.0	GCP	2		1,000.0	700.0		15,000.0		
22,800.0													



(5)	(6)	(7)		(8)	(9)	(10)	(11)					(1)
SIX YEARS (000's)	COST BEYOND 2011-2012 (000's)	PRIOR APPROPRIATIONS (000's)	YEAR FS	TOTAL CAP COSTS (000's) (5)+(6)+(7)	COMP PLAN CONFORM	STATUS OF PLANS	COST BREAKDOWNS FOR SIX-YEAR EXPENDITURES (000's)					PROJ. NO.
							PRELIM PLANS	FINAL PLANS	LAND ACQUI-SI- TION	CONST	EQUIP / FURNISH	
17,250.0	Ongoing	NA		17250	GCP	1		1725.0		15,525.0		6
17,250.0												7
250.0	None	None		250.0	GCP	1		25.0		225.0		
500.0	None	None		500.0	GCP	1		50.0		450.0		
800.0	None	None		800.0	GCP	1		80.0		720.0		
1,200.0	None	None		1,200.0	GCP	1		120.0		1,080.0		
500.0	None	None		500.0	GCP	1		50.0		450.0		
300.0	None	None		300.0	GCP	1		30.0		270.0		
1,509.0	None	None		1,509.0	GCP	1		150.9		1,358.1		
150.0	None	None		150.0	GCP	1		15.0		135.0		
720.0	None	None		720.0	GCP	1		72.0		648.0		
1,710.0	None	None		1,710.0	GCP	1		171.0		1,539.0		
780.0	None	None		780.0	GCP	1		78.0		702.0		
810.0	None	None		810.0	GCP	1		81.0		729.0		
1,430.0	None	None		1,430.0	GCP	1		143.0		1,287.0		

(1) PROJ. NO.	(2) PROJECT TITLE	(3) PROJ. PRIO.	(4) PROGRAMMED EXPENDITURES & FUNDING SOURCES (FS) (000's)											
			2006-2007		2007-2008		2008-2009		2009-2010		2010-2011		2011-2012	
			FS	IF	FS	IF	FS	IF	FS	IF	FS	IF	FS	IF
7	Distribution Mains such as - (continued)													
	98th, Leighton to "O" St HD								1,100.0					
	"O" St, 84th to 98th HD									1,200.0				
	"O" St, 98th to 112th HD											1,300.0		
	E. Mains in Area # 5 - 703500	A												
	98th, Pine Lake to Yankee Hill		120.0	IF										
	F. Mains in Area # 6 - 703600	A												
	Rokeby, 33rd to 40th HD						460.0							
	84th, Amber Hill to Yankee Hill CB		360.0	UR										
	Yankee Hill, 70th to 84th CB		500.0	UR	200.0									
	Rokeby, 40th to 48th SE		200.0	UR	130.0									
	Yankee Hill, 56th to 84th SE				2,920.0									
	70th, Yankee Hill to Rokeby SE												900.0	
	G. Mains in Area # 7 - 703700	A												
	Folsom, Pioneers to Old Cheney Bel								700.0					
	Folsom, Old Cheney to W Denton Bel								700.0					
	Old Cheney, 1st to SW 12th Bel								700.0					
	Coddington, Van Dorn to Pioneers to Old Cheney												1,300.0	
	Old Cheney, Coddington to SW 12th												350.0	
	<b>TOTAL PROJECT 7</b>		4,579.0		420.0	UR	1,080.0	UR	1,800.0	UR	0.0	UR	0.0	UR
					2,910.0	RB	1,280.0	RB	1,760.0	RB	2,050.0	RB	5,980.0	RB
					320.0	IF	340.0	IF	360.0	IF	450.0	IF	470.0	IF
8	Distribution Capacity/Subsidies to Street Construction													
	A. Distribution System Capacity Cost - 506050	A	350.0	UR	370.0	UR	380.0	UR	400.0	UR	420.0	UR	440.0	UR
	B.1 Subsidies To Street Construction - 701690	A	450.0	UR	400.0	UR	100.0	UR	500.0	UR	380.0	UR	300.0	UR
	B.2 Subsidies to Antelope Valley - 701690	A	50.0	UR	100.0	UR	400.0	UR	150.0	UR	120.0	UR	0.0	
	<b>TOTAL PROJECT 8</b>		850.0		870.0		880.0		1,050.0		920.0		740.0	
	<b>FUNDING SOURCE BREAKDOWN:</b>													
	DC (Developer's contribution)		159.0		0.0		0.0		0		0		0.0	
	RB (Revenue Bonds)		13,030.0		15,850.0		17,970.0		14,885.0		12,310.0		11,140.0	
	UR (Utility Revenue)		4,050.0		1,900.0		2,075.0		4,210.0		1,340.0		1,960.0	
	IF (Impact Fee Revenue)		1,530.0		950.0		1,020.0		1,090.0		1,150.0		1,220.0	
	<b>DIVISION TOTALS</b>		18,769.0		18,700.0		21,065.0		20,185.0		14,800.0		14,320.0	

(5)	(6)	(7)		(8)	(9)	(10)	(11)					(1)
SIX YEARS (000's)	COST BEYOND 2011-2012 (000's)	PRIOR APPROPRIATIONS (000's)	YEAR FS	TOTAL CAP COSTS (000's) (5)+(6)+(7)	COMP PLAN CONFORM	STATUS OF PLANS	COST BREAKDOWNS FOR SIX-YEAR EXPENDITURES (000's)					PROJ. NO.
							PRELIM PLANS	FINAL PLANS	LAND ACQUI- TION	CONST	EQUIP / FURNISH	
1,100.0	None	None		1,100.0	GCP	7		110.0		990.0		7
1,200.0	None	None		1,200.0	GCP	1		120.0		1,080.0		
1,300.0	None	None		1,300.0	GCP	1		130.0		1,170.0		
120.0												
460.0	None	None		460.0	GCP	7		33.0		297.0		
360.0	None	None		360.0	GCP	1		292.0		2,628.0		
700.0	None	None		700.0	GCP	1		70.0		630.0		
330.0	None	None		330.0	GCP	1		67.0		603.0		
2,920.0	None	None		2,920.0	GCP	1		36.0		324.0		
900.0	None	None		900.0	GCP	1		25.0		225.0		
700.0	None	None		700.0	GCP	1		70.0		630.0		
700.0	None	None		700.0	GCP	1		70.0		630.0		
700.0	None	None		700.0	GCP	1		70.0		630.0		
1,650.0	None None	None None		1,650.0	GCP	1		165.0		1,485.0		
39,639.0												
2,360.0	Ongoing	NA		2,360.0	GCP	0		226.0		2,034.0		8
2,130.0	Ongoing	NA		2,130.0	GCP	0		218.0		1,962.0		
820.0	Ongoing	NA		820.0	GCP	0		122.0		1,098.0		
5,310.0												
159.0												
85,185.0												
15,535.0												
6,960.0												
107,839.0												

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